WHAT IS CLAIMED IS:

1. A lithographic projection apparatus, comprising:

a housing;

a first exposure system having at least one movable part, said at least one movable part being located within said housing, said first exposure system including:

(i) a radiation system configured to provide a beam of radiation;

(ii) a support structure configured to support a patterning device that serves to impart the beam of radiation with a pattern in its cross-section;

(iii) a first substrate holder for holding a substrate;

(iv) a projection system configured to project the patterned beam onto a target portion of said substrate;

(v) a positioning device configured to position said first substrate holder relative to said projection system;

(vi) a first control unit configured to control said positioning device; and

(vii) a position disturbance correction system constructed to counteract a disturbance of a position of said first substrate holder, wherein the disturbance is caused by gas movements induced by movement of said at least one movable part.

2. The lithographic projection apparatus of Claim 1, wherein said at least one movable part comprises at least one of said support structure and said first substrate holder.

3. The lithographic projection apparatus of Claim 1, wherein said housing comprises an additional movable part, which is movable by a second control unit.

4. The lithographic projection apparatus of Claim 3, wherein said additional movable part comprises at least one of a second exposure stage that has at least a

movable second substrate holder and a measuring stage for measuring a property of a substrate that has at least one of a movable substrate measuring table and a movable measuring unit.

5. The lithographic projection apparatus of Claim 4, wherein said position disturbance correction system comprises a separation wall, which can be positioned between said additional movable part and at least one of said first substrate holder and said patterning device.

6. The lithographic projection apparatus of Claim 5, wherein said separation wall comprises an acoustic damping material.

7. The lithographic projection apparatus of Claim 5, wherein said first substrate holder is located in a first space and said additional movable part is located in a second space within said housing, and wherein said separation wall is movable into a first position in which said separation wall substantially seals said first space with respect to said second space, and moveable into a second position when swapping of said first and second substrate holder is enabled.

8. The lithographic projection apparatus of Claim 3, wherein at least one of said first and second control unit are designed to maintain a predetermined minimum distance between said first substrate holder and said additional moving part at least during projecting of the patterned beam.

9. The lithographic projection apparatus of Claim 8, wherein the predetermined minimum distance is equal to at least 50% of a time averaged distance between said first substrate holder and said additional movable part at least during projecting of the patterned beam.

10. The lithographic projection apparatus of Claim 9, wherein the predetermined minimum distance is substantially equal to said time averaged distance.

11. The lithographic projection apparatus of Claim 3, wherein said position disturbance correction system is constructed to reduce a speed of said additional movable part to a speed value, which is less than a predetermined maximum speed value, when a distance between said first substrate holder and said additional movable part is less than a predetermined minimum distance value.

12. The lithographic projection apparatus of Claim 3, wherein said position disturbance correction system is constructed to reduce an acceleration of the additional movable part to an acceleration value, which is less than a predetermined maximum acceleration value, when a distance between said first substrate holder and said additional movable part is less than a predetermined minimum distance value.

13. The lithographic projection apparatus of Claim 11, wherein the maximum speed value is less than a time averaged value of the speed of said additional movable part during projecting of the patterned beam onto said substrate in said first exposure system.

14. The lithographic projection apparatus of Claim 12, wherein the maximum acceleration value is less than a time averaged absolute value of the acceleration of said additional movable part during projecting of the patterned beam onto said substrate in said first exposure system.

15. The lithographic projection apparatus of Claim 1, wherein a wall, which at least partly surrounds a first space in which said movable part is located, comprises at least one aperture, and wherein said first space communicates with a second space behind said wall, as seen from the movable part.

16. The lithographic projection apparatus of Claim 15, wherein said second space comprises the environment outside the lithographic projection apparatus.

17. The lithographic projection apparatus of Claim 1, further comprising a gas transport mechanism configured to transport a flow of gas pass said substrate during projection of the patterned beam onto said substrate, and wherein said position disturbance correction system comprises gas suction mechanism configured to suction gas out of the flow after the flow has passed said substrate.

18. The lithographic projection apparatus of Claim 1, wherein said position disturbance correction system comprises a planar motor for moving said at least one movable part.

19. The lithographic projection apparatus of Claim 1, wherein said position disturbance correction system comprises at least one loudspeaker for moving gas at least in a space surrounding said movable part.

20. The lithographic projection apparatus of Claim 1, wherein said position disturbance correction system comprises at least one of a first substrate holder drive unit and a projection system movement device constructed for moving at least a part of said projection system with respect to said housing, such that a displacement of a target portion with respect to the projection beam due to gas movement is counteracted.

21. The lithographic projection apparatus of Claim 1, wherein said position disturbance correction system comprises a third control unit comprising,

at least one of a gas pressure sensitive device and an interferometer system

configured to measure at least one of gas displacement and a gas pressure changes, and

a position correction information retrieval system configured to provide previously determined information on position correction as a function of movement of said at least one movable part of the measurement system.

22. The lithographic projection apparatus of Claim 21, wherein said third control unit comprises an interferometer system constructed for measuring at least one of gas displacement and gas pressure changes in a direction towards said at least one movable part.

23. The lithographic projection apparatus of Claim 1, wherein said radiation comprises electromagnetic radiation having a wavelength for which transmissive optics are available, and wherein said position disturbance correction system comprises a vacuum system constructed for decreasing a gas pressure inside said housing, at least at the position of said at least one movable part.

24. The lithographic projection apparatus of Claim 23, wherein said vacuum system is constructed for decreasing said gas pressure to a value of at most 90% of atmospheric pressure.

25. The lithographic projection apparatus of Claim 23, wherein said vacuum system is constructed for decreasing said gas pressure to a value of a most 50% of atmospheric pressure.

26. A device manufacturing method for use with a lithographic projection apparatus comprising a first exposure system and a second system,

wherein said exposure system comprises a radiation system configured to provide a beam of radiation, a support structure for supporting a patterning device that serves to impart the beam of radiation with a pattern in its cross-section, a first substrate holder for holding a substrate, a projection system constructed for projecting

the patterned beam onto a target portion of said substrate, a positioning device for positioning said substrate holder relative to the projection system, and a first control unit constructed for controlling said positioning device; and

wherein said second system comprises at least one of a corresponding second exposure system and a measurement system, said measurement system comprising a second substrate holder for holding a second substrate, a measurement device constructed for projecting onto a target portion of the second substrate a measurement beam for measuring at least one of a surface property and a substrate marker position of said target portion, and a second control unit constructed for moving a movable part of the measurement system such that the second substrate is movable with respect to the measurement beam, said method comprising:

providing a first substrate and a second substrate;

projecting the patterned beam of radiation onto a target portion of the first substrate; and

measuring said at least one of a surface property and a substrate marker position of said target portion,

wherein, during said measuring of at least one of a surface property and a substrate marker position of said target portion, at least one of speed and acceleration of said second substrate holder is reduced to a corresponding speed value and acceleration value, which is less than a respective predetermined maximum speed value and a predetermined maximum acceleration value, when a distance between said first substrate holder and said second substrate holder is less than a predetermined minimum distance value.

27. A device manufacturing method, comprising:

providing a lithographic projection apparatus comprising an exposure system and a measurement system, said measurement system comprising a substrate holder for holding a substrate, a measurement device constructed for projecting onto a target portion of the second substrate a measurement beam for measuring at least one of a surface property and a substrate marker position of said target portion; and a control unit constructed for moving a movable part of said measurement system such that said

substrate is movable with respect to the measurement beam;

providing a substrate;

projecting the patterned beam of radiation onto a target portion of said substrate;

measuring at least one of a surface property and a marker position of said substrate,

wherein said substrate is accelerated during at least a part of said measuring at least one of a surface property and a marker position of said substrate.

28. A device manufacturing method for an exposure system having at least one moving part, comprising:

projecting a patterned beam of radiation onto a target portion of a substrate; and

correcting a disturbance of a position of said substrate during said projecting, wherein the position disturbance is caused by gas movements induced by movement of said at least one movable part.

30. The device manufacturing method of Claim 29, further comprising suctioning gas out of a flow of gas movements after the flow has passed said substrate.

31. The device manufacturing method of Claim 29, further comprising counteracting a displacement of the target portion with respect to the patterned beam due to gas movement by use of at least one of a substrate holder drive unit and a projection system movement device constructed for moving at least a part of said projection system with respect to a housing, in which it is disposed.

34. The device manufacturing method of Claim 29, further comprising retrieving previously determined information on position correction as a function of movement of said at least one movable part of the measurement system.

35. A lithographic projection apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support structure configured to support a patterning device that serves to impart the beam of radiation with a pattern in its cross-section;

a substrate holder for holding a substrate;

a projection system configured to project the patterned beam onto a target portion of said substrate;

a positioning device configured to position said substrate holder relative to said projection system; and

a position disturbance correction system that counteracts a disturbance of a position of said substrate holder, wherein the disturbance is caused by gas movements induced by movement of said at least one of said support structure and said substrate holder.

36. A lithographic projection apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support structure configured to support a patterning device that serves to impart the beam of radiation with a pattern in its cross-section;

a substrate holder for holding a substrate;

a projection system configured to project the patterned beam onto a target portion of said substrate;

a positioning device configured to position said substrate holder relative to said projection system; and

means for counteracting a disturbance of a position of said substrate holder, wherein the positional disturbance is caused by gas movements.

37. A device manufacturing method, comprising:

providing a patterned beam of radiation onto a target portion of a first substrate carried by a first substrate holder;

measuring at least one of a surface property and a substrate marker position of a target portion of a second substrate carried by a second substrate holder; and

reducing, during said measuring, at least one of a speed and acceleration of said second substrate holder to a corresponding speed value and acceleration value, which is less than a predetermined maximum speed value and predetermined maximum acceleration value, respectively, when a distance between said first substrate holder and the second substrate holder is less than a predetermined minimum distance value.

38. A device manufacturing method, comprising:

projecting a patterned beam of radiation onto a target portion of a substrate;

measuring at least one of a surface property and a substrate marker position of a target portion of said substrate; and

accelerating said substrate during said measuring.